

Echocardiogram requested. We recorded time to Echocardiograms and total time to surgery from admission.

**Results:** Average time to Echocardiograms was 1.7 days. Average time to surgery from Echocardiogram was 1.25 days. 17 patients with no significant Echocardiogram findings had surgery delayed beyond 36 hours. A common reason for Echocardiogram requests was possible auscultation of a cardiac murmur by junior doctors.

**Conclusions:** The policy to request Echocardiograms was unselective on patients admitted with neck of femur fractures. We suggested reviewing all high-risk patients presenting to Accident and Emergency, with a fractured neck of femur, by a senior member of the medical team. Echocardiograms should be requested for all these patients. An intensive care specialist review the day before surgery, as opposed to the day of surgery was recommended. These measures could help achieve national and local targets, bearing in mind cost and patient safety implications of early operative treatment for patients admitted with a fractured neck of femur.

#### 0220: INITIAL MANAGEMENT OF OPEN FRACTURES IN A&E

Jonathon Black<sup>1</sup>, Anna Harris<sup>2</sup>, Francesca Saddington<sup>2</sup>, Hamid Rokan<sup>1,2</sup>, Chellappan Sivaji<sup>1,2</sup>. <sup>1</sup>Lister Hospital, Stevenage, UK; <sup>2</sup>Southend University Hospital, Westcliff-on-Sea, UK.

**Aim:** Does our district general hospital meet the BOA/BAPRAS standards for open fracture management?

**Methods:** Closed loop audit of patients presenting with open fractures between June 2009 and September 2010 (Cycle 1) and December 2010 and November 2011 (Cycle 2). Departmental teaching was conducted between the cycles. Data collected included antibiotic use, documentation of neurovascular status, wound coverage and limb stabilization.

**Results:** N = 41 (Cycle 1), N = 49 (Cycle 2). Neurovascular examination was documented in 66% of Cycle 1 compared with 69% of Cycle 2 and dressing use in 56% and 65% respectively. Antibiotics were given in 85% (Cycle 1) and 80% (Cycle 2) of patients and this was intravenous in 46% and 33%.

**Conclusions:** Little difference was found following the intervention with standards not being met. This may be partially due to a) poor documentation b) large numbers of digital fractures and no agreed guidelines for appropriate antibiotics. This audit highlights the need for a local pathway for open fracture management and a policy for antibiotic use in digital fractures.

#### 0221: A KNEED FOR SATISFACTION – IS AVOIDING THE TOURNIQUET THE ANSWER?

R. Parkes, A. Maborukoje, T. Okoro, K. Azurza. Betsi Cadwaladr University Health Board, Bangor, UK.

**Aim:** To consider the effect of intraoperative tourniquet use on patient satisfaction following total knee replacement (TKR).

**Method:** Postal questionnaires sent to a cohort of patients (single surgeon series) after TKR assessing their level of satisfaction with the procedure. Chi-squared analysis was used to assess whether the use of a tourniquet led to a greater degree of satisfaction after TKR.

**Results:** A total of 112 questionnaires were sent out. The response rate was 82.1% (92/112), with 79.3% (73/92) of patients satisfied and a further 11.9% (11/92) unsure. In patients in whom a tourniquet was not used (n=17), there was a greater degree of post-operative satisfaction (15/17) compared to patients in whom a tourniquet was used (n=70); 79% (55/70), but this was not statistically significant, p=0.30.

**Conclusions:** Avoiding tourniquet is associated with a greater degree of patient satisfaction following TKR. Further studies with increased sample size are needed to investigate this relationship further.

#### 0234: WASTAGE OF INTRAMEDULLARY NAILS IN A DISTRICT HOSPITAL, HOSPITAL/2011

Kahlan Karim<sup>1</sup>, Simon Robinson<sup>2</sup>, Simon Barnes<sup>2</sup>. <sup>1</sup>Torbay Hospital, South West Peninsula, UK; <sup>2</sup>Leighton Hospital, Mersey Deanery, UK.

**Aim:** Assessing the waste of intramedullary devices in one hospital over one year would highlight if surgeons could improve nail sizing technique. This would therefore decrease waste and cost.

**Method:** review of theatre book for the period from 01/01/2011 to 31/12/2011.

**Results:** Over the study period, 77 intramedullary devices used, 35 IMHS, 10 femoral, 22 tibia, 10 of other categories e.g. humours and radius. From the total, 8 (10.3%) nails were not used and wasted. Of these, 1 (12.5%) was

IMHS, 2 (25%) were femoral nails, 3 (37.5%) were tibial nails, and 2 (25%) of other types. In 4 (50%) of the cases, the waste was due to incorrect sizing by the surgeon and in 2 (25%) of the cases the management plan changed into plating rather than nailing. One of the wasted nails was opened by theatre staff in error and another one was opened but not used. Over the period under study, the calculated total cost of the waste was £5,559.50.

**Conclusion:** There is a notable annual incidence of IM nail waste in the study hospital. The majority of the waste was related to surgeon's peri-operative sizing judgement. However, availability of different nail sizes on stock might affected the decision.

#### 0274: POST-OPERATIVE HYPONATRAEMIA AND ELECTIVE ARTHROPLASTY SURGERY: A REVIEW OF THE INCIDENCE, CONTRIBUTING FACTORS, TREATMENT AND OUTCOMES FOLLOWING TOTAL HIP ARTHROPLASTY (THA) AND TOTAL KNEE ARTHROPLASTY (TKA) IN A REGIONAL PRIMARY JOINT UNIT

Catherine Higgins, Catherine Mullan, Christopher O'Neill, Tim Mawhinney, Sonia Derbyshire, David Beverland. Musgrave Park Hospital, Belfast, UK.

Post-operative hyponatraemia (Na<135mmol/L) in the elective arthroplasty setting is a well recognised entity with a multi-factorial aetiology.<sup>1</sup> A retrospective review of prospectively gathered clinical data for 122 patients undergoing THA and TKA between July and October 2012 was performed. Laboratory data was analysed to determine pre and post-operative serum sodium (Na) concentrations. Medical notes were reviewed to determine patient symptoms, regular medications, intravenous fluid prescription, and duration of hospital stay.

Overall, 16.4% of patients developed post-operative hyponatraemia (18.6% of TKAs and 14.3% of THAs). Antihypertensive medications, particularly thiazide diuretics were associated with development of hyponatraemia. Overall mean hospital stay was 3.5 days post-operatively (4.5 days for patients with hyponatraemia and 3.4 days for unaffected patients). In the THA group, mean post-operative hospital stay was increased by 21% in patients with hyponatraemia (4.0 days Vs 3.3 days). In the TKA group, mean post-operative hospital stay was increased by 50% in patients with hyponatraemia (5.1days Vs 3.4 days).

Post-operative hyponatraemia in our elective THA and TKA population remains a relatively frequent occurrence, with considerable impact on duration of hospital stay. Identification of patient sub-groups at risk of developing post-operative hyponatraemia may help reduce its incidence and provide substantial cost and resource savings.

#### 0275: THE INFLUENCE OF PATELLOFEMORAL DEGENERATIVE CHANGES ON THE OUTCOME OF UNICOMPARTMENTAL KNEE REPLACEMENT (UKA)

Ali Abdulkarim<sup>1</sup>, Turlough O'Donnell<sup>2</sup>, Michael Neil<sup>3</sup>. <sup>1</sup>Cappagh National Orthopaedic Hospital, Dublin, Ireland; <sup>2</sup>UPMC Beacon Hospital, Dublin, Ireland; <sup>3</sup>St Vincent's Private Clinic, Sydney, Australia.

**Aim:** Patellofemoral (PF) joint degeneration is widely considered to be a contraindication to medial compartment UKA. We examined the validity of this preconception

**Methods:** information gathered prospectively on 147 consecutive patients who underwent the Repicci II® UKA for medial compartment osteoarthritis between July 1999 and September 2000 by the same surgeon. The status of the PF joint was assessed intra-operatively in all patients, and accordingly patients were divided into two groups. Sixty nine had associated PF osteoarthritis (group A) while 78 patients had a normal PF compartment (group B). Variables measured included the International Knee Society (IKS) score, limb alignment, and range of motion. Radiographs, demographic data, length of hospital stay, peri-operative complications. All subsequent surgery, and survivorship at 10 years were recorded. The mean follow-up was 9.4 years (range: 5-10.7 years) and results of the 2 groups compared.

**Results:** We found no significant differences in terms of IKS scores, alignment, and flexion between the two groups. However, extension was significantly improved post-operatively in those patients with minimal or no PF joint degenerative disease (p<0.05).

**Conclusion:** Damage to the patellofemoral joint to the extent of full-thickness cartilage loss is not a contraindication to UKA for medial compartment osteoarthritis.